

Notice of Allowability

Application No.

09/855,485

Applicant(s)

LU, SHIN-YEE

Examiner

Art Unit

ANH H DO

2624

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address–

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment on 8/23/2004.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 14 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


ANH HONG DO
PRIMARY EXAMINER

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remark (page 9, second and last paragraph and page 10, first paragraph), filed 8/23/2004, with respect to claims 1, 16, 11, 13, and 14 have been fully considered and are persuasive. The rejection of claims 1, 16, 11, 13, and 14 has been withdrawn.

1. Claims 1-16 are allowed.

2. The following is an examiner's statement of reasons for allowance:

* Claims 1 and 16 have been amended to overcome the rejection under 35 U.S.C. 112, second paragraph;

* Claims 11 and 14 have been amended to clarify the distinctions of the present invention from the cited prior art;

* The present invention provides a new method, system and computer product that allows a given process to be run on any machine within a family of machines, which eliminates the need for time-consuming and costly send-ahead wafers would provide for much desired "job portability" in semiconductor manufacturing (see specification, page 4, lines 11-16). Particularly, the new method, system and computer product comprise the following features, which the prior art taken either singly or in combination does not teach:

- imaging with the optical machine, using first and second exposures, first and second metrology patterns on the substrate at the first and second levels, respectively, in an overlaid manner, by aligning the second exposure to the first exposure using the zero-offset alignment patterns, said first and second metrology patterns based on the virtual zero-offset alignment metrology patterns (see independent claims 1 and 16);

- a computer system having pattern recognition software stored therein and a memory unit containing one or more virtual zero-offset alignment patterns accessible to said pattern recognition software, at least one of said one or more virtual zero-offset alignment patterns corresponding to the first and second metrology patterns; and at least one of said one or more zero-offset alignment patterns corresponding to the first and second alignment patterns (see independent claim 8);

- comparing first and second images of actual alignment patterns based on said virtual alignment pattern formed on first and second levels of a substrate to said virtual alignment pattern (see independent claims 11 and 14).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720. The examiner can normally be reached on 5/4-9.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 10, 2005.


ANH HONG DO
PRIMARY EXAMINER